

## ABSTRACT OF THE DISCLOSURE

A bioreactor culture system and process for producing conifer somatic embryos comprise a closed vessel, a biomass immobilization matrix, a liquid culture medium recirculating equipment, and a gas control equipment. The biomass immobilization matrix is installed in a closed vessel, a liquid culture medium is introduced in the closed vessel, and the level of liquid culture medium in the closed vessel is kept lower than the biomass immobilization matrix. The liquid culture medium recirculating equipment sprays liquid culture medium from the closed vessel onto the biomass immobilization matrix to thereby irrigate the maturing immobilized biomass.